CLAIMS

1. Optical apparatus for creating a image on a background view which includes at least a first lens through which a user can see the background view with a first eye, which is light transmissive and which has an outer reflective surface at an interface of a first surface of the first lens with atmosphere and an inner reflective surface at an interface of a second surface of the first lens with the atmosphere, and a device for projecting an image onto the outer reflective surface which is orientated to reflect a first image of the projected image, of a first light intensity, onto the first eye and wherein the first lens is made from a lens material with an absorption A of at least 60% at least in the spectral range of 560nm to 660nm so that a second image of the projected image which is directed onto the first eye by the inner reflective surface has a second intensity which is less than 16% of the first intensity.

2. Optical apparatus according to claim 1 wherein the lens material has at least 60% absorption in the spectral range of 400nm to 700nm.

3. Optical apparatus according to claim 1 wherein the lens material has at least 70% absorption.

4. Optical apparatus according to claim 3 wherein the second intensity is less than 9% of the first intensity.

5. Optical apparatus according to claim 1 wherein the lens material has at least 80% absorption.

6. Optical apparatus according to claim 5 wherein the second intensity is less than 4% of the first intensity.

7. Optical apparatus according to claim 1 wherein the lens material has a refractive index *n* such that a light factor given by the expression $\left[1-\left(\frac{n-1}{n+1}\right)^2\right]^2 . (1 - A)^2$ is less than 0,10.

8. Optical apparatus according to claim 7 wherein the light factor is less than 0,05.

9. Optical apparatus according to claim 1 wherein the first lens is of substantially uniform thickness.

10. Optical apparatus according to claim 9 wherein the thickness of the first lens is less than 2,0mm.

11. Optical apparatus according to claim 1 which includes a second lens which is adjacent a second eye of the user and which is made from a lens material which is the same as the lens material from which the first lens is made.

12. Optical apparatus according to claim 11 which includes a support for the first and second lenses with the second lens being orientated, with respect to the user, so that a line of vision of the second eye is at a right angle to a surface of the second lens which opposes the second eye, and with the first lens being orientated, with respect to the user, so that a line of vision of the first

eye is at an acute angle to the first surface of the first lens on a side which is adjacent the second eye.

13. Optical apparatus according to claim 1 wherein the image projecting device includes a shield with at least one light transmissive section which defines the image.

14. Optical apparatus according to claim 13 wherein the light transmissive section is formed by at least one narrow slit in the shield.

15. Optical apparatus according to claim 13 which includes a filter adjacent the shield for imparting a desired colour to the image.

16. Optical apparatus according to claim 1 wherein the first lens is made from a lens material with a refractive index of at least 1,1.